

ART. I.—*A New Form of Circuit Closer for the Firing of Torpedoes.*

BY R. E. JOSEPH, ESQ.

[Read 11th April, 1878.]

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ART. II.—*Photographs on the Retina.*

BY JAMES JAMIESON, M.D.

[Read 11th April, 1878.]

AT the meeting of the Berlin Academy of Sciences, on 23rd November, 1876, there was read a communication from Professor Franz Boll, of Rome, on the subject of some remarkable properties of the retina, which had not till then been described. He experimented first with frogs, in the following manner :—A frog, which had been kept for some time in the dark, was beheaded, and its eye removed as quickly as possible. The front of the eye was cut off with scissors, and the retina lifted from the dark layer behind, when it was seen to be of an intense red colour, which rapidly faded, so that in ten to twenty seconds it had disappeared. For the next thirty to sixty seconds the retina had a satiny lustre, which also gradually disappeared, leaving the structure quite colourless and transparent. Boll found that the colour has its seat in the rods, and not in the cones; and that it is found in all animals in which there is a well-developed layer of rods. Even in the rods it is confined to the outer portion, which is made up of thin plates. Along with these red rods Boll found a smaller number of green ones, which also undergo some changes of shade under the influence of light, but which have not had their properties well investigated; and he had not, indeed, been able to discover whether they occur in any other animals than the amphibia. He tried the effect of exposing the eye to light